

PATENT APPLN. NO. 10/585,814  
RESPONSE UNDER 37 C.F.R. § 1.116

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REMARKS

Claims 1-4, 8-12 and 16-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kraeft, U.S. Patent No. 2,350,468, in view of Bezin, US Patent 4,811,626, and further in view of Valle, Japanese Patent JP 2003-72666.

Reconsideration and withdrawal of this rejection is respectfully requested. The combination of Kraeft, Bezin and Valle is insufficient to support a case of prima facie obviousness of the rejected claims under 35 U.S.C. § 103(a).

Claim 1 of the application defines a crank for a bicycle comprising an outer shell made of at least two fiber-reinforced plastic members, the at least two fiber-reinforced plastic members being overlapped and connected to each other so that a connection line thereof appearing outside extends in a longitudinal direction of the crank, and at least a part of the connection line is covered with a fiber-reinforced plastic layer.

As noted in the Final Action, Kraeft as modified by Bezin (as proposed by the Office) does not disclose a crank for a bicycle in which part of a connection line, extending in a longitudinal direction of the crank and formed by two members of an outer shell of the crank that are overlapped and connected to each other, is covered with a fiber-reinforced plastic layer. The Office relies

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on Valle as teaching a part of a connection line (identified as "near 14, 12") being covered with a fiber-reinforced plastic layer (identified as "36: Fig. 5") for the purpose of providing the structural characteristic required for a crank (citing lines 11-14 of paragraph [0007] of the English translation of Valle). The Office concludes that it would have been obvious to a person of ordinary skill in the art at the time of the present invention to provide "at least a part of said outer shell is covered with a fiber-reinforced plastic layer, as taught by Valle, in the device of Kraeft as modified above for the purpose of providing the structural characteristic required for a crank".

Applicants respectfully submit that the teachings of Valle do not support the conclusion of the Office.

First, Valle does not disclose a connection line formed by two members of an outer shell that are overlapped and connected to each other, the connection line extending in a longitudinal direction of the crank. The "connection line" of Valle identified by the Office is formed by the insertion of a core 10 into a uniting element 16 or 18 and extends perpendicularly of the longitudinal direction of the crank. A connection line formed by the insertion of a core 10 into a uniting element and extending perpendicularly of the longitudinal direction of a crank does not provide the benefits of

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a connection line extending longitudinally of the crank as described in paragraph [0019] of US 2008/0224440 A1, the publication of the present application (hereinafter: "'440A1").

Second, Valle does not teach that the fiber-reinforced plastic layer 36 provides the structural characteristic required for a crank. Valle describes that the process of piling up the tape 36 "and the sheet 38" provides the structural characteristic required for a crank.

Moreover, Valle leads away from covering a part of a connection line formed by outer shells of a crank with a fiber-reinforced plastic layer. In Valle, a sheet (or sheets) 38 forms an outer shell of the crank. No part of the outer sheet 38 is covered with a fiber-reinforced plastic layer. (See Fig. 7).

Further, neither Bezin nor Valle clearly discloses outer shells of a bicycle crank being overlapped. On the other hand, in the present invention the side-wall of one fiber-reinforced plastic member is overlapped with that of the other fiber-reinforced plastic member. Such a structure of the overlapped plastic members effectively increases rigidity of a bicycle crank. The benefit of the claimed feature can be found in paragraph [0018] of US '440A1.

Claim 18 also includes the limitations regarding fiber-reinforced plastic members being overlapped and connected to each

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other and a connection line thereof appearing outside extending in a longitudinal direction of the crank, and at least a part of the connection line being covered with a fiber-reinforced plastic layer. Therefore, the comments above also apply to the rejection of claim 18 under 35 U.S.C. § 103(a) over Kraeft in view of Bezin and further in view of Valle.

As a final comment concerning the above rejection of claims 1-4, 8-12 and 16-19, the position of the Office regarding claim 16 is not correct.

First, the limitation "bonded directly to" in claim 16 is not a process limitation. The term "bonded" has the same meaning as "adhered". Second, Bezin does not support bonding, or adhering, of bushings 16 and 14 of the crank assembly of Kraeft to the members of the outer shell. The bushings of Kraeft are held in place by the shape of the outer shell (for example, the circular ends of the shell members).

For the above reasons, the 35 U.S.C. § 103(a) rejection of claims 1-4, 8-12 and 16-19 over Kraeft in view of Bezin and further in view of Valle is not proper and should be withdrawn.

The remaining rejections of claims 5, 13, 14 and 15 under 35 U.S.C. § 103(a) depend on the propriety of the rejection of claim 1 on which these claims ultimately depend. Since the rejection of

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claim 1 has been shown to be improper, the rejections of claims 5, 13, 14 and 15 are also improper.

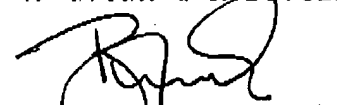
Withdrawal of the 35 U.S.C. § 103(a) rejections and an allowance of the present application are in order and are requested.

The foregoing is believed to be a complete and proper response to the Office Action dated March 12, 2010.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,  
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